# Nanomaterials and Worker Health

## Medical Surveillance, Exposure Registries, and Epidemiologic Research

*Program and Abstracts*

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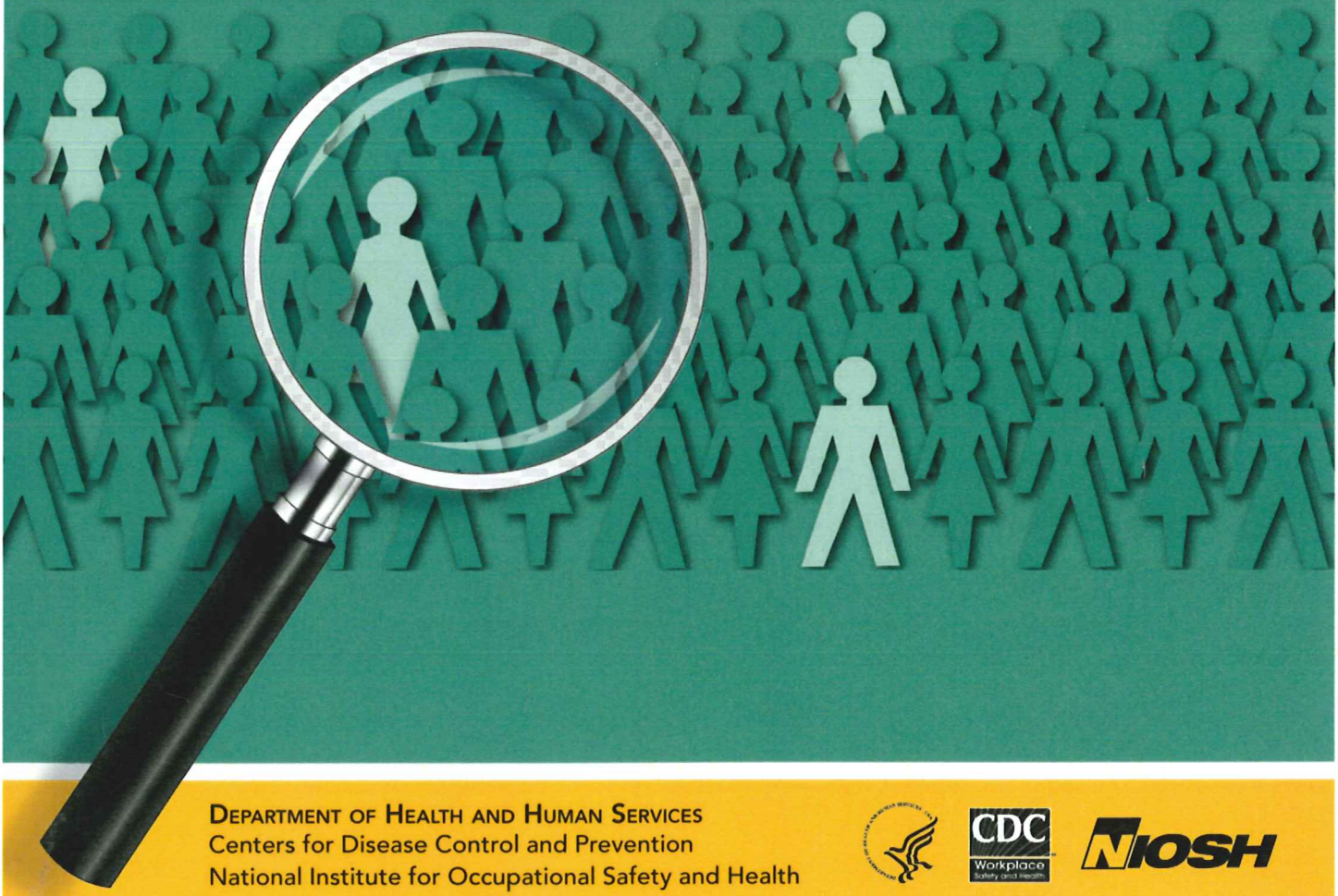


DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
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MOUNTAIN AND PLAINS EDUCATION AND RESEARCH CENTER

## European Strategies for Assessing Occupational Health Effects of Engineered Nanomaterials — Lessons from The NanoImpactNet Conference

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Nanomaterials present great opportunities for novel products and technological solutions, but also raise health concerns. Some manufacturing jobs already involve production or handling of nanomaterials, but knowledge of nanomaterials hazards is incomplete. Thus, precautionary risk management should involve identification of potentially exposed workers, measures to minimize exposure, and health evaluations.

Recording and analysis of exposure are currently weak, but are prerequisites for the assessment of health effects. Few data are being collected and metrics remain disputed. A pragmatic approach is proposed: identification of potential sources of nanoparticle emissions, including work practices; qualitative assessments of potential exposure (number of companies, workers, quantities of materials etc); and measurement of exposure parameters at selected sites.

Specific medical screening cannot yet be recommended due to a lack of information about health effects and biomarkers, but general medical surveillance could be undertaken. A major challenge in Europe is the variety of existing Occupational Health (OH)-reporting schemes. In countries such as France, basic health status information is already being collected and made available for (future retrospective) studies, whilst in other countries such data are difficult to access or not even being collected. Furthermore, the acceptability of approaches for studying OH is strongly influenced by different national regulatory systems.

Overall, we should combine experimental, clinical and epidemiological evidence to characterize the relationship between exposure and health outcomes and to set up preventative measures. Medical examinations before a worker begins handling nanomaterials could give useful baseline data to both workers and employers.